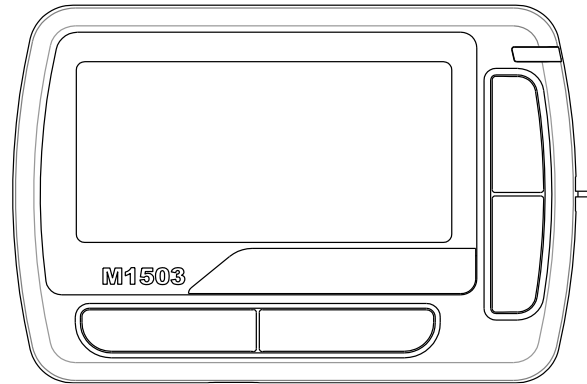


M1503



RESPONDER II™

USER GUIDE

Firmware 1.1

Document 12-077
Version 1.3

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Preface

Congratulations on your selection of the **M1503 Responder II™** response pager! This device, together with a **SPARKGAP™ Messaging System**, represents the state of the art for alerting, notification, and mobilization.

Audience

This guide is intended for users of the M1503 Responder II pager.

Conventions

This guide uses the following conventions for instructions and information.

Notes, Cautions, and Warnings

Notes, cautions, and warnings use the following conventions and symbols:



This symbol indicates that the reader should take note. Notes contain useful suggestions, references to other documents, or helpful hints.



This symbol indicates that the reader must be careful. In this situation, you might do something that could result in equipment damage or loss of data.



This symbol means danger! You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

Safety Information

RF Operation Characteristics

Your M1503 contains a transmitter and a receiver. When it is ON, it receives and transmits radio frequency (RF) energy. The M1503 transmits in the frequency range of 896-902 MHz and employs digital modulation techniques. The M1503 output power level is typically 1 Watt. In 1991, the Institute of Electrical and Electronics Engineers (IEEE), and in 1992, the American National Standards Institute (ANSI), updated the 1982 ANSI Standard for safety levels with respect to human exposure to RF Energy. Over 120 scientists, engineers, and physicians from universities, government health agencies and industry, after reviewing the available body of research, developed this updated standard.

Electronic Devices

Most modern electronic equipment is shielded from RF energy; however, RF energy from your M1503 may effect inadequately shielded electronic equipment. Check with the manufacturer or its representative to determine if the following equipment or systems are adequately shielded from external RF energy:

- Motor Vehicle electronic and entertainment systems (standard and any add-on equipment)
- Medical Equipment, hospital or personal devices (such as pacemakers, hearing aids, etc.)

*Turn your M1503 **OFF** in health care facilities where any regulation posted in the areas instructs you to do so.* Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Aircraft

Current regulations prohibit the use of certain types of portable electronic devices (PEDs) on board commercial aircraft, due to the potential of interference with navigational and communications equipment. *Turn your M1503 **OFF** before entering any aircraft.*

Blasting Areas

Construction crews often use remote control RF devices to set off explosives. To avoid interfering with blasting operations, *turn your M1503 **OFF** when in a “blasting area” or in areas posted “Turn off two-way radio”.*

Potentially Explosive Atmospheres

Do not charge your batteries or operate your battery charger within the proximity of any potentially explosive atmospheres. It is rare, but these actions may generate sparks. Areas with a potentially explosive atmosphere are often, but not always, clearly marked and include the following:

- Gas stations
- Below deck on boats
- Fuel or chemical transfer/storage facilities
- Areas where air may contain chemicals or particles, such as grain dust, or metal powders
- Any area where you would normally be advised to turn OFF your motor vehicle



Do not bring your M1503 pager or basic dock into areas with potentially explosive atmosphere.

1 Getting Started

1.1 Unpacking Your M1503

Your M1503 comes with the following parts and accessories

- Holster
- Lanyard/Bungee
- USB Charging Cable
- Charging Dock (Optional)
- Wall Adapter Power Supply (Optional)

1.2 Engaging the Battery

Your M1503 contains an integrated lithium ion battery, which is disconnected prior to shipment using a small battery disconnect switch located next to the data connector, under a protective dust cover. Prior to operating your pager, you must engage the battery by sliding the disconnect switch toward the data connector.



Prior to disengaging the battery with the disconnect switch, the pager should be turned off with the UI. Failure to do this could result in lost message or settings information.

1.3 Turning the Pager On

Once the battery is engaged, the M1503 will automatically turn on. If the M1503 is turned off using the user interface (5.8.7), you can turn it back on by simply holding down the blue **Select** key for 2 seconds.

2 M1503 Response Pager



Your M1503 consists of a digital radio, CPU, LCD display, four buttons, a speaker, a status LED, and a data/charging port, enclosed together in a durable polycarbonate housing. It also comes with a belt holster, bungee, and charging cable, along with an optional charging/programming dock and wall adapter.

2.1 LCD Display

The M1503 display is a 160x64 LCD matrix displays that shows textual information as well as several icons:

2.2 Buttons

The M1503 includes four buttons: **Up**, **Down**, **Escape**, and **Select**.

2.3 User Interface

The M1503 user interface consists of a hierarchical menu system displayed on the LCD and navigated with the four buttons **Up**, **Down**, **Select**, and **Escape**. The **Up** and **Down** buttons move the current selected menu item up or down, and it scrolls displayed message text up or down. The **Select** button selects the current menu item, and the **Escape** moves the user back one menu level.

The LCD display is backlit for use in low light conditions. You can adjust backlight intensity and LCD contrast to suit personal preferences, and backlight can be enabled altogether. You can configure when the LCD and the backlight activate, and how long they stay on.

2.4 Status LED

Your M1503 pager has one status LED on its front, top right hand corner. Depending on configuration, this LED may signal receiver operation, message reception, and completion of a firmware update procedure.

2.4.1 Receiver Operation

When configured (5.8.2.5), the status LED will flash each time it receives a control frame from the network. It flashes green when it is attempting registration, or when it is registered in battery-optimized mode. It flashes blue when it is registered in speed-optimized mode (5.8.2.3). It also flashes yellow whenever a control frame is received while the battery is low.

2.4.2 Message Alert

When configured (5.8.3.2.9), the status LED will flash red when the pager receives a new message.

2.4.3 Firmware Update

Using the CRS Dock Manager software, a user may update their M1503 firmware. Upon conclusion of this operation, the Status LED glows GREEN to indicate success, or RED to indicate an update failure

2.5 Holster



Carrying your pager outside of the holster makes it more vulnerable to damage from impact with other objects.

The M1503 includes an opaque or translucent polycarbonate holster with an attached belt clip. To use the holster, secure it onto your belt, then slide your pager down into the holster with the lanyard connector facing up and the LCD facing away from you. The pager will snap into place, where it will be held firmly during normal use. To remove the pager from the holster, simply grasp the pager and slide it up and out. When using the translucent holster, the pager can also be operated without removing it from the holster.

2.6 Bungee



Handling your pager, without the bungee securely connected between it and a belt loop, makes your pager more vulnerable to damage from accidental drops.

The M1503 includes an elastic bungee that attaches the pager to a belt loop, providing extra protection against accidental drops. The bungee features a thread loop on one end, and a swivel clip on the other end. To use the bungee, carefully loop the thread through the metal lanyard connector loop on the right side of the M1503, then open the thread loop and pull the swivel clip end of the bungee through the thread loop. This creates a secure connection between the bungee and the pager, which will not interfere with the holster or basic dock. When carrying the pager, simply attach the swivel clip to a belt loop.

2.7 Data/Charging Connector

The M1503 includes a 16-contact data connector, located under a black neoprene protective boot on the lower edge of the pager. It can connect to a M1503 charging cable, or a M1503 basic dock, enabling battery recharge or firmware update.

2.8 M1503 Charging Cable



You may leave your M1503 connected to the charging cable indefinitely, without harming the pager.

The M1503 includes a charging cable, which connects to the data/charging connector on the bottom of the pager, to a power source, either a computer USB port or USB wall adapter. To charge your M1503 with this cable, simply connect the charging cable to the pager and to the power source.

3 M1503 Basic Dock (Option)



You may leave your M1503 in the basic dock indefinitely, without harming the dock or the pager.

Your M1503 pager may include a *Basic Dock*, including a USB cable and wall adapter. By inserting the pager into the dock, you can recharge the pager battery as well as update its firmware. The dock connects by USB cable to the supplied wall adapter or host computer (not included). To use your charger, simply connect the USB cable to the dock USB port, and then connect the other end of the cable to the wall adapter or computer.



3.1 Dock LEDs

During the charging process, two LEDs on the basic dock display the charging status of the pager battery using a green and red LED:

Action	Meaning
●	LEDs Off – No pager present
★ --	Red LED Flashing – The battery is charging
★ —	Green LED – The battery is fully charged

3.2 Dock Manager Software

You may install the *CRS Dock Manager* software package on a PC, which will run in the foreground or background and automatically manage one or more basic docks connected to the computer. This software automatically detects pagers as they are plugged in for charging, and updates their firmware as necessary to the most current revision. Please contact Critical Response Systems for more information regarding this software.

4 General Operation

Your M1503 is a *response pager*, designed to operate as part of a *SPARKGAP* messaging system. When your M1503 receives messages, it alerts you and allows you to read and reply to these messages. Depending on the network configuration, the person (or computer system) sending the message can be notified when you receive, read, and reply to each message, either directly or by way of the incident response dashboard.

4.1 Message Reception

Your M1503 receives both *personal messages*, sent specifically to you, and *group messages*, sent simultaneously to you and others in the same group. The way these messages are received and displayed are very similar, but there are some important differences. Personal messages are sent using *guaranteed delivery*. If you are out of range when a personal message is sent, the system will hold the message for up to several days until it locates you and delivers the message. Group messages are sent to multiple members of a particular group, and the sender is quickly notified of who received the message and who did not. Group messages are held for delivery as well, but only for a comparatively short period, a minute or less.

4.2 Message Reply

Depending on system and message settings, you may reply to messages after they are received. Additionally depending on system and message settings, the sender can be notified as you receive, read, and reply to each personal or group message.

4.3 Message Storage

As your M1503 receives messages, it stores them into memory organized into *folders*. Personal messages are stored in your *personal folder*, while group messages are stored in a separate *group folder* named after the group. By selecting **Received Messages** from the **Main Menu** page, then navigating into the relevant folders, you can review previously received messages. Your system administrator can assign email addresses and phone numbers to each folder in your M1503, depending on relevant operational policies.

4.4 Message Transmission

Depending on the configuration of your SPARKGAP Messaging System, your M1503 can transmit preprogrammed messages to pre-programmed addresses. This type of messages is called a *canned message*. These canned messages and destination addresses are programmed into your pager over the air by your system administrator, or directly by you through the *SPARKGAP Application Gateway*. Message transmission is available from the main menu by selecting SEND MESSAGE.

4.5 General Status

Depending on the configuration of your SPARKGAP Messaging System, you can use your M1503 to notify the system of your general status. Status values (e.g., *on duty*, *off duty*, etc.) are programmed into your pager over the air by your system administrator, or directly by you through the *SPARKGAP Application Gateway*.

4.6 Configuration

Your M1503 contains many parameters that you can set through the user interface. These include pager-wide settings such as keyclick or LCD contrast, as well as alerting options specific to a particular folder or group of folders. These parameters appear as menu items in various pages. You can select the line, then use the Up and Down buttons to navigate through the available settings. Once you have selected the correct setting, you can press the Select button again to save it. You can also press the Escape button to return to the page without changing the parameter.





















4.7 Battery Charging

The M1503 is powered by an internal battery, which requires periodic charging. The battery charge level indicator (lower left part of the main menu page) indicates the current charge level as 0-4 bars, and this indicator changes slowly as the battery drains during use. If the battery reaches a critical threshold, the pager will begin to issue warning beeps, and finally turn off. The battery can be recharged at any time by plugging it into the dock or charging cable.

5 User Interface

The M1503 employs a hierarchical user interface (“UI”) that includes both text and icons. The UI divides functionality into *pages*, each page accessible from a parent page, with the overall organization resembling a tree. General operation involves navigation through a series of menu options or display text on each page using the **Up** and **Down** buttons. A single push of the **Up** or **Down** button moves a *menu selector* up or down one item or scrolls the page up or down one line. Holding the **Up** button moves to the top of the page, and holding the **Down** button moves to the bottom of the page. The **Select** button takes an action based on the selected menu item, either moving you to a new page, beginning a multiple-choice selection process, or opening a pop-up window. The **Escape** button moves you “up” one page to the parent page, exits the pop-up window, or ends the multiple-choice selection process.

5.1 Icons

Icon	Name	Meaning
	RSSI	Display 0-4 bars indicating the control channel received signal strength
	Dock	Indicates the pager is correctly inserted into a charging dock
	Cable	Indicates the pager is correctly plugged into a charging cable
	Battery Level	Displays 0-4 bars indicating the current capacity level of the battery.
	Battery Charge	Indicates that the battery is currently charging
	Phone Message	Indicates the presence of a new telephone message.
	Campus / Roaming	Indicates that the pager is in campus or roaming coverage.
	Silent Mode	Indicates that the pager is in silent mode.
	Normal Alert Mode	Indicates that the pager is in normal alert mode.
	Vibrate Mode	Indicates that the pager is in vibrate mode.
	Stealth Mode	Indicates that the pager is in stealth mode.
	Quiet Time	Indicates that the pager is set for quiet time.
	Alarm	Indicates an alarm is set.
	No Coverage	Indicates that the pager currently has no control channel.
	1-way Coverage	Indicates that the pager has a control channel, but has not yet registered with the system.
	2-way Coverage	Indicates that the pager is registered with the system.
	Message	Represents an unopened, opened, or locked message.
	Priority Message	Represents an unopened, opened, or locked priority message.
	Transmit Message	Represents a queued, sending, sent, or locked transmit message.
	Failed Message	Represents a message transmission that has failed.

5.2 Identification Page

The **Identification** page appears after power on and when you press the **Escape** button from the **Main Menu** page. Also, if your LCD blanks after a period of inactivity, you may hit any key to display this page. The **Identification** page shows your personalized information, as programmed by your system administrator. This information may help you find your pager if it is lost. If the system is configured to support general status, it will be displayed at the bottom of this page. From this screen, you may press **Select** to display the **Main Menu** page.



5.3 Main Menu Page

The **Main Menu** page provides menu options into the four main functions of your pager. It also shows a bar of status icons on the bottom, and the current time and date at the top.



You can use the up/down button to select one of the following choices:

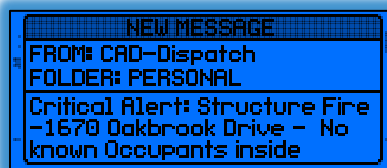
Field	Description
Received Messages	This menu item allows you to view and manage your received messages.
Sent Messages	This menu item opens the list of sent messages and messages queued for transmission.
Send a Message	This menu item sends a message.
Setup	This menu item allows you to set up your pager.

5.4 Receiving Messages

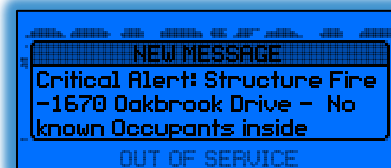
When your M1503 receives a new message, it stores it into the appropriate folder and then optionally displays one of three configurable *message pop-up screens*, as it sounds a configurable alert melody. You may push the **Select** button to open the message, where you can see additional information and take further action (see 5.5). You may also push the **Escape** button to return to the preceding page.



Message pop-up 1 displays the *from address*, *destination folder*, and *subject*.



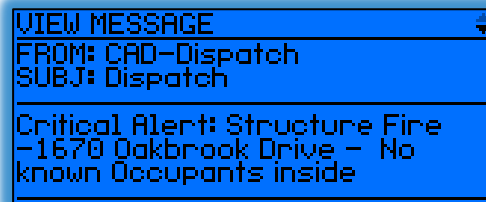
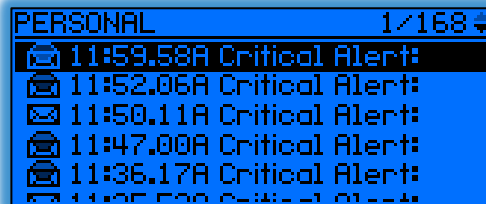
Message pop-up 2 displays the *from address* and *destination folder*, as well as the first few lines of the *body*.



Message pop-up 3 displays the first few lines of the *body*.

5.5 Viewing Received Messages

As your M1503 receives messages, it stores them into memory so that you can view them later. Each message resides in an appropriate folder, either the personal folder or a group folder. You can view the message lists by selecting **Received Messages** from the main menu page, selecting the folder you want to examine. You may open the message for viewing or other actions by selecting the particular message of interest. Your M1503 can store a maximum of 200 total messages across all folders. Once this limit is reached, the pager will delete the oldest message to make room for each new message as it arrives.



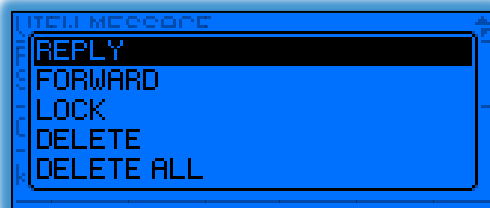
The number appearing to the left of the **Received Messages** menu item on the main screen indicates the number of unread messages. Likewise, the number appearing to the left of each folder in the **Message Folders** page indicates the number of unread messages in the folder. If there are more than 99 messages your pager will show an asterisk (*) instead of a number.

Once you navigate to a message, pressing **Select** will open the message for viewing, allowing you to scroll through the whole message and view the header information. Each received message contains a **body** and a **header**, which are both displayed. The **body** contains the actual message sent to the pager, and the **header** contains additional information fields describing the message. The header may contain a set of basic fields, or basic plus advanced fields, depending on the folder settings.

Field	Type	Description
From	Basic	This field contains the email address (or similar identifying information) of the person or automated system sending you the message. The contents of this field depend on where the message came from as well as how it entered the system (email, telephone, CAD, etc.).
Subject	Basic	This field contains the subject of the message as specified by the message sender.
Folder	Advanced	This field displays the folder containing the message.
Queue	Basic	This field contains the time and date the message was sent into the system. This header field is only available for messages sent to the Personal folder.
Recv	Basic	This field contains the time and date the message was received by the pager.
Status	Advanced	This field contains the subject of the message.
Security	Advanced	This field displays the security/encryption technology used to transmit the message.
Msn	Advanced	This field displays the message sequence number.
Length	Advanced	This field displays the message length in terms of display characters.

5.5.1 Message Options

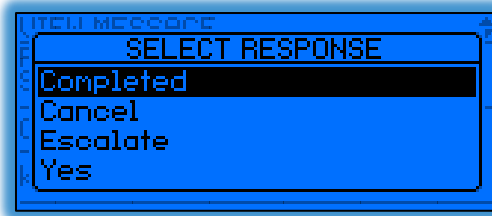
You may press the **Select** button while viewing a message to open the message options pop-up menu. This pop-up menu enables you to take an action on the message.



Action	Description
Reply	Responds to the message with a <i>Multiple-Choice Reply</i> .
Forward	Forwards the message to a recipient in your canned address list.
Lock	Locks the message, protecting it from deletion.
Unlock	Unlocks the message, allowing it to be deleted.
Delete	Deletes the message from the folder.
Delete All	Deletes all the unlocked messages from the folder.

5.5.1.1 Replying to a Message

Certain messages allow you to reply with multiple-choice responses. With these messages, your **Message Option** pop-up will include a **Reply** action. Selecting this action will prompt you to select a response, which will be returned to the person who sent you the message.



You may navigate through the list using the **Up** and **Down** buttons, and select the appropriate response by pressing the **Select** button. You may also return to the **View Message** page at any point, without sending a reply, by pressing **Escape** button. Depending on the message, the responses shown in the list may include *preprogrammed responses* as well as *embedded responses*. *Preprogrammed responses* are loaded into your pager over the air by your system administrator, or directly by you through the *SPARKGAP Management Gateway*. *Embedded responses* are included with the message, and can differ from message to message.

5.5.1.2 Forwarding a Message



Selecting the **Forward** action from the message options pop-up menu brings up a second pop-up window displaying your list of canned addresses. You may navigate through the list using the **Up** and **Down** buttons, and select an address by pressing the **Select** button. This will forward the message to the selected address. You may also return to the **View Message** page at any point, without forwarding the message, by pressing **Escape** button.

5.6 Viewing Sent Messages

Your M1503 can transmit canned messages, replies, general status changes and system requests. The last 32 transmit messages whether pending or already sent, are stored in the **Sent Messages** page, which serves as both a transmission queue and archival storage.



5.6.1 Message Options

You may press the **Select** button while viewing a message to open the message options pop-up menu. This pop-up menu enables to take an action on the message.



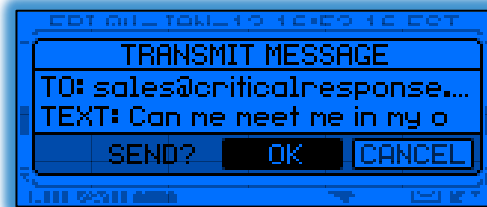
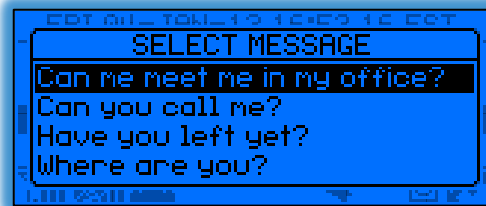
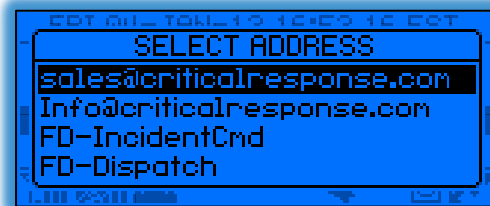
Action	Description
View Rx Message	Opens a page to view the received message associated to the transmit message. This option is only available for reply-type messages.
Lock	Locks the message, protecting it from deletion.
Unlock	Unlocks the message, allowing it to be deleted.
Delete	Deletes the message from the folder.
Delete All	Deletes all the unlocked messages from the folder.

5.7 Sending Messages

Your M1503 can transmit preprogrammed messages to a list of preprogrammed recipients. These *Canned Messages* allow you to originate a new message to a specific recipient. The list of messages and recipients are configured over the air by a system administrator, or by you directly through the *SPARKGAP Management Gateway*.

Canned messages are a useful way to quickly and easily send short status-type messages (*Running Late*, *Out of Service*, *In Service*, etc.) to specific recipients, or to issue quick commands (*signal TAC4*, *report status*, etc.) to small groups. In some cases this feature can also be used for more complex interoperability tasks, depending on your agency or department procedures and circumstance. Your M1503 supports up to 32 canned messages and 15 canned addresses.

To send a message from your M1503, select the **Send a Message** menu item from the **Main Menu** page. Your M1503 will then prompt you to select a recipient and then a message from 2 separate pop-up windows. Use your **Up** and **Down** buttons to navigate these lists and then press **Select** to select the correct item. You will then see the final message composed on the screen. To send the message, select **Send**; to abandon the message and return to the **Main Menu** page, select **Quit**. You may also press the **Escape** key to return to the **Main Menu** page.



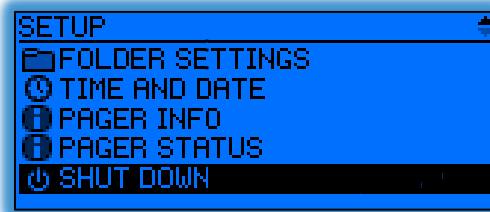
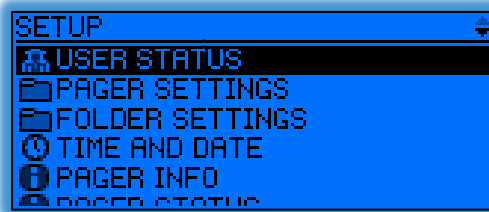
Once you select OK, the message is placed into the M1503 transmit queue, where it will wait for a few seconds until transmitted to the network. While messages are in queue, the number of pending transmissions will appear next to the **Sent Messages** menu item on the **Main Menu** page. Once all pending messages are successfully transmitted, this count will vanish.

5.8 Setup

Selecting the **Setup** menu item on the **Main Menu** page opens a set of pages allowing you to view and configure the status and behavior of your M1503 pager.



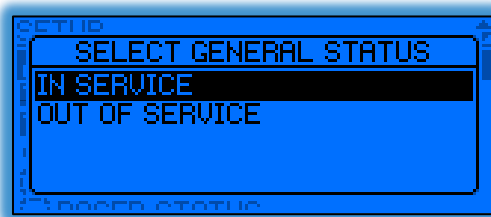
This selection opens the top-level **Setup** page, containing the following menu items:



Menu Item	Function
User Status	Opens the User Status pop-up, enabling you to change your current user status.
Pager Settings	Opens the Pager Settings page, enabling you to view and modify parameters related to general pager operation.
Folder Settings	Opens a page tree enabling you to view and change parameters related to the alerting behavior of different folders.
Time and Date	Opens the Time and Date page, allowing you to set parameters related to the clock and alarm settings.
Pager Info	Shows pager information such as serial number, firmware revision, etc.
Pager Status	Shows pager status such as battery level, signal strength, current channel, registration state, etc.
Shut Down	Turns off the pager.

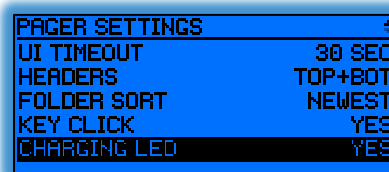
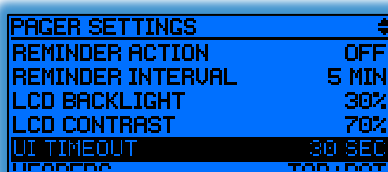
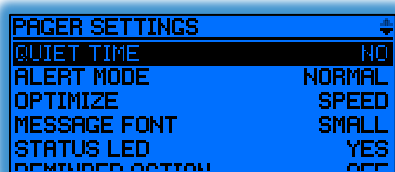
5.8.1 User Status

Selecting the **User Status** menu item in the **Setup** menu page prompts you to change your general status. Depending on how your system administrator sets up your system, the value you select will be transmitted and made available to dispatchers and command staff. Your pager can contain up to 8 general status messages. You can set these strings directly using the *SPARKGAP Administrative Gateway*, or your system administrator can set them for you.



5.8.2 Pager Settings

Selecting **Pager Settings** in the **Setup** page opens the **Pager Settings** page. This page contains general parameters used to control the behavior of your pager. To change these parameters, you can navigate up and down to highlight the corresponding menu item, and then select the item to change it. After the item is selected, you can again use the **Up** and **Down** buttons to scroll through the available values for the parameter. You may press **Select** again to save the new value, or **Escape** to return to revert to the old value and return to the **Pager Settings** page.



5.8.2.1 Quiet Time

The **Quiet Time** parameter allows you to put your M1503 in a mode where alerts and reminders can be silenced on a folder-by-folder basis, for non-priority messages. Setting this parameter to **Yes** enables quiet time; setting this parameter to **No** disables it. During quiet time, folders set to follow quiet time (5.8.3.1.2) will not alert or issue reminder actions (5.8.2.6, 5.8.2.7, and 5.8.3.2.4).

5.8.2.2 Alert Mode

The **Alert Mode** parameter selects the alerting mode for your pager, either **Normal**, **Vibrate**, **Silent**, or **Stealth** (when enabled by your system administrator), defined as follows:

Value	Description
Normal	The pager alerts normally according to the setting of the received message folder.
Vibrate	The pager alerts using only the vibrate motor upon receipt of normal messages, although priority messages follow the priority message settings of the appropriate message folder.
Silent	The pager does not alert upon receipt of normal messages, although priority messages follow the priority message settings of the appropriate message folder.
Stealth	The pager does not alert upon receipt of any priority or non-priority message. Furthermore the pager does not make any sound, or activate the status LED or LCD backlight, or pulse the vibrate motor for any reason. <i>Use of this setting is not compliant with NFPA-1221 and must be specifically enabled by your system administrator.</i>

5.8.2.3 Optimize

The **Optimize** parameter allows you to choose whether your M1503 is optimized for faster message delivery or longer battery life. For longer battery life you should set this menu item to **Battery**, and for faster message delivery you should set this menu item to **Speed**.

5.8.2.4 Message Font

The **Message Font** parameter allows you to select which font your M1503 uses to display messages. For a larger font you should set this menu item to **Large**, and for a smaller font you should set this menu item to **Small**. Messages displayed with the large font are somewhat more legible under a wider variety of viewing conditions; however, use of the small font allows more information to fit on the screen.

5.8.2.5 Status LED

The **Status LED** parameter determines whether your pager's status LED flashes when receiving control frames for the system. When set to **Yes**, the status LED will flash upon reception of each control frame 2.4, either green during registration or when registered in battery-optimized mode, or blue when registered in speed-optimized mode. When set to **No**, the status LED will not flash as control frames are received.

5.8.2.6 Reminder Action

The **Reminder Action** parameter defines whether and how your pager reminds you about unread messages, either **Off**, **Vibrate**, **Low**, **Medium**, or **High**. The **Off** value disables the reminder function entirely. The **Vibrate** issues a vibrate pulse to remind you of unread messages. The **Low**, **Medium**, and **High** values set the volume for a quick double-chirp for unread normal messages, and a triple-chirp for unread priority messages.

5.8.2.7 Reminder Interval

The **Reminder Interval** parameter sets the duration between reminder actions.

5.8.2.8 LCD Backlight

The **LCD Backlight** parameter sets the intensity of the LCD backlight, from 0% (off) to 100% (brightest).

5.8.2.9 LCD Contrast

The **LCD Backlight** parameter sets the LCD contrast, from 0% (lowest contrast) to 100% (highest contrast).

5.8.2.10 UI Timeout

The **UI Timeout** parameter sets the length of time the LCD stays active after your last button press.

5.8.2.11 Headers

The **Headers** parameter determines what header information (5.5) is shown when you view a message and how it is arranged, either **Top**, **Bot**, **Top Full**, **Bot Full**, and **Top+Bot**, defined as follows:

Value	Description
Top	The pager will display basic headers above the message body.
Bot	The pager will display basic headers below the message body.
Top Full	The pager will display basic and advanced headers above the message body.
Bot Full	The pager will display basic and advanced headers below the message body.
Top+Bot	The pager will display basic headers above the message body and advanced headers below the message body.

5.8.2.12 Folder Sort

The **Folder Sort** parameter determines how folders are sorted in the **Message Folders** page (5.5), either **Off**, **Newest**, or **Newest Unread**, defined as follows:

Value	Description
Off	Folders are displayed in the order that they have been programmed into the pager.
Newest	Folders are ordered so that the folders with the newest messages are listed at the top.
Newest Unread	Folders are ordered so that the folders with the newest unread messages are listed at the top.

5.8.2.13 Key Click

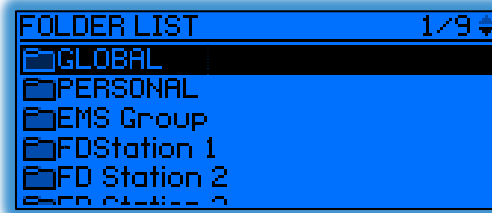
The **Key Click** parameter determines whether button presses cause a click sound. When set to **Yes**, the pager will make a click sound each time you press a button. When set to **No**, button presses will not make any sound.

5.8.2.14 Charging LED

The **Charging LED** parameter determines whether LEDs on the basic dock (3) indicate charging progress when the dock is used to charge the pager. When set to **Yes**, the dock LED's will show charging progress as per section 3.1. When set to **No**, the dock LED's will remain off.

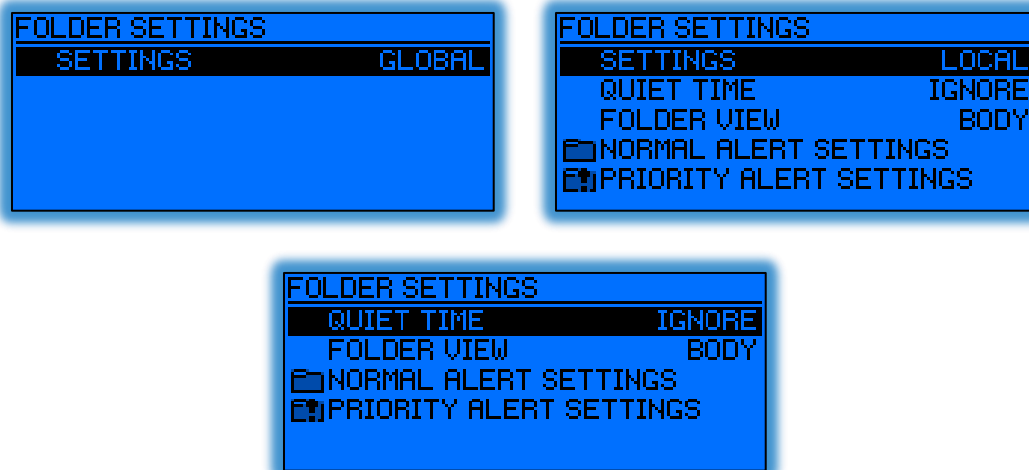
5.8.3 Folder Settings

You may view and adjust the behavior of each folder by selecting **Folder Settings** menu from the **Setup** page. This action takes you into the **Folder List** page. This page displays a list of the folders loaded into your pager, plus a *Global* folder which may be used to control behavior of one or more other folders.



5.8.3.1 Common Settings

Selecting one of the folders from the folder list will bring you to the common settings page for that folder. This page contains 3 settings (or 2 for the global folder) plus sub-pages for folder normal and priority alert settings.



5.8.3.1.1 Settings

The **Settings** parameter determine whether the folder uses the Global folder settings, or whether it uses it's own individual settings. When set to **Local**, you can set up the folder-specific parameter settings. When set to **Global**, the folder takes its behavior from the *Global* folder settings. Note that with the *Global* folder, this menu item is not available.

5.8.3.1.2 Quiet Time

The folder **Quiet Time** parameter determines whether the folder obeys the pager-wide **Quiet Time** setting (5.8.2.1). When set to **Follow**, the folder will not alert or issue reminder actions when the pager is in quiet time. When set to **Ignore**, the folder will issue new message alerts and reminders regardless of the pager-wide **Quiet Time** setting.

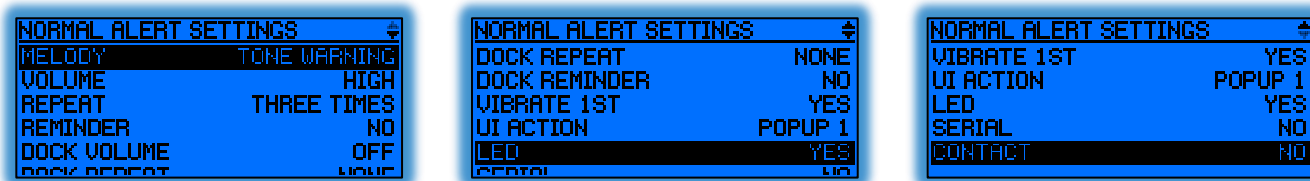
5.8.3.1.3 Folder View

The **Folder View** parameter determines how the folder page (see 5.5) lists messages, either **From**, **Subject**, **Body**, or **Auto** as follows:

Value	Description
From	Each message summary line will show the message From field.
Subject	Each message summary line will show the message Subject field.
Body	Each message summary line will show the first few words from the message Body .
Auto	Each message summary line will show the Subject field, Body , or From field, depending on which field contains information.

5.8.3.2 Normal Alert Settings.

The **Normal Alert Settings** page allows you to specify the behavior of a folder as it receives non-priority messages. You may navigate and set these parameters to customize the detailed behavior of each folder.



5.8.3.2.1 Melody

The **Melody** parameter specifies the melody played by the M1503 speaker upon receipt of a non-priority message.

5.8.3.2.2 Volume

The Volume parameter specifies the loudness of the melody played upon receipt of a non-priority message, either **Off**, **Low**, **Medium**, or **High**.

5.8.3.2.3 Repeat

The **Repeat** parameter specifies the number of times to play the melody upon receipt of a non-priority message, either **None**, **Once**, **Three Times**, or **Forever**.

5.8.3.2.4 Reminder

The **Reminder** parameter determines whether the folder will issue a periodic reminder action (5.8.2.6 and 5.8.2.7) when unread non-priority messages are present in the folder.

5.8.3.2.5 Dock Volume

The **Dock Volume** parameter specifies the loudness of the melody played upon receipt of a non-priority message while the pager is in a dock, either **Off**, **Low**, **Medium**, or **High**.

5.8.3.2.6 Dock Repeat

The **Dock Repeat** parameter specifies the number of times to play the melody upon receipt of a non-priority message while the pager is in the dock, either **None**, **Once**, **Three Times**, or **Forever**.

5.8.3.2.7 Vibrate 1ST

The Vibrate 1st parameter specifies whether the pager issues a vibrate pulse prior to the melody.

5.8.3.2.8 UI Action

The UI Action parameter determines action taken by the UI upon receipt of a non-priority message, either **None**, **Popup 1**, **Popup 2**, or **Popup 3** (see 5.4).

5.8.3.2.9 LED

The **LED** parameter specifies whether or not the **Status LED** (2.4) flashes red upon receipt of a non-priority message.

5.8.3.2.10 Serial

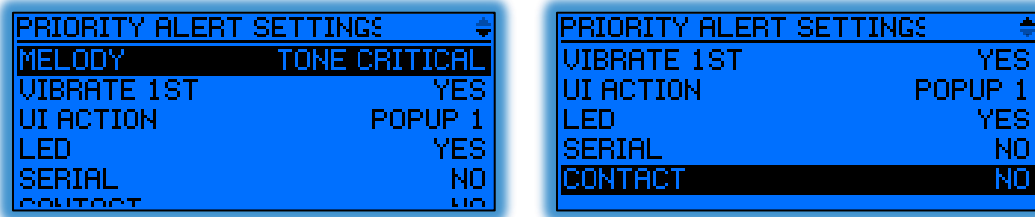
The **Serial** parameter specifies whether the message is relayed onto the data/charging port auxiliary serial port upon receipt of a non-priority message.

5.8.3.2.11 Contact

The **Contact** parameter allows you to specify whether the contact closure on the data/charging port is engaged upon receipt of a non-priority message.

5.8.3.3 Priority Alert Settings

The **Priority Alert Settings** page allows you to specify the behavior of a folder as it receives priority messages. You may navigate and set these parameters to customize the detailed behavior of each folder.



5.8.3.3.1 Melody

The **Melody** parameter specifies the melody played by the M1503 speaker upon receipt of a priority message.

5.8.3.3.2 Vibrate 1st

The Vibrate 1st parameter specifies whether the pager issues a vibrate pulse prior to the melody.

5.8.3.3.3 UI Action

The UI Action parameter determines action taken by the UI upon receipt of a priority message, either **None**, **Popup 1**, **Popup 2**, or **Popup 3** (see 5.4).

5.8.3.3.4 LED

The **LED** parameter specifies whether or not the Status LED flashes red upon receipt of a priority message.

5.8.3.3.5 Serial

The **Serial** parameter specifies whether the message is relayed onto the data/charging port auxiliary serial port upon receipt of a priority message.

5.8.3.3.6 Contact

The **Contact** parameter allows you to specify whether the contact closure on the data/charging port is engaged upon receipt of a priority message.

5.8.4 Time and Date

TIME AND DATE	
TIME FORMAT	12 HOUR
DATE FORMAT	DD/MM
TZ SOURCE	NETWORK
USER TZ	EASTERN -5:00
USER DST	STANDARD
SNOOZE INTERVAL	15 MIN

TIME AND DATE	
USER DST	STANDARD
SNOOZE INTERVAL	15 MIN
BEDSIDE MODE	NO
ALARM 1	OFF
ALARM 2	OFF

5.8.4.1 Time Format

The **Time Format** parameter specifies how time will be displayed on you pager, either **12 Hour** or **24 Hour**.

5.8.4.2 Date Format

The **Date Format** parameter specifies how dates will be displayed on you pager, either **DD/MM** or **MM/DD**.

5.8.4.3 TZ Source

The **TZ Source** parameter specifies how your pager will establish the current time zone. If it is set to **Network**, your pager will receive the time zone over the air from the system. If it is set to **User**, you should enter the time zone manually using the **User TZ** and **User DST** fields described below.

5.8.4.4 User TZ

The **User TZ** parameter allows you to specify your pager's time zone. The pager observes this field only if you set the **TZ Source** parameter to **User**.

5.8.4.5 User DST

The **User DST** parameter allows you to specify whether your pager observes daylight savings time, either **Standard** or **Daylight**. The pager observes this field only if you set the **TZ Source** parameter to **User**.

5.8.4.6 Snooze Interval

The **Snooze Interval** parameters specify how long the pager will wait to re-issue an alarm after you select the snooze option.

5.8.4.7 Bedside Mode

The **Bedside Mode** parameter indicates whether *bedside mode* will be engaged when the pager is placed into a basic dock. Bedside mode gives the appearance of a bedside LCD clock, allowing you to see the current time at a glance. Selecting **Yes** will enable Bedside mode when in the dock; selecting **No** will disable it.

5.8.4.8 Alarm 1 & Alarm 2

The **Alarm 1** and **Alarm 2** pages contain the set of parameters necessary to set up the two alarms available on the M1503.

ALARM 1	
ENABLED	OFF
ALARM TIME	1200 AM
MELODY	TONE 0
VOLUME	MEDIUM
DOCK VOLUME	HIGH
VIBRATE 1ST	NO

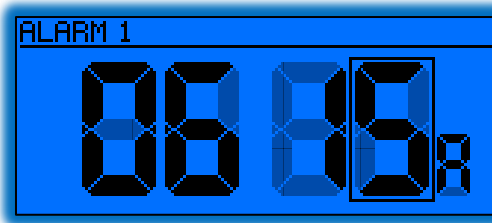
ALARM 1	
VIBRATE 1ST	NO
SUNDAY	OFF
MONDAY	OFF
TUESDAY	OFF
WEDNESDAY	OFF
THURSDAY	OFF

5.8.4.8.1 Enabled

The **Enabled** parameter turns the alarm function on or off. If the alarm is turned off, the alarm will not sound and the rest of the alarm settings are ignored.

5.8.4.8.2 Alarm Time

Selecting the Alarm Time menu item opens a sub-page which allows you to set the time of the alarm. Using the **Up** and **Down** buttons to move right and left respectively, you may select each digit with the **Select** button. Then, again using the **Up** and **Down** buttons, you may change the digit and press **Select** again to save it. Once you have set the alarm time correctly, you may press **Escape** to return to the main Alarm menu page.



5.8.4.8.3 Melody

The **Melody** parameter specifies which melody to play when the alarm goes off.

5.8.4.8.4 Volume

The **Volume** parameter specifies how loud to play the melody when the alarm goes off, either **Off**, **Low**, **Medium**, or **High**.

5.8.4.8.5 Dock Volume

The **Dock Volume** parameter specifies how loud to play the melody when the alarm goes off while the pager is in the dock, either **Off**, **Low**, **Medium**, or **High**.

5.8.4.8.6 Vibrate 1st

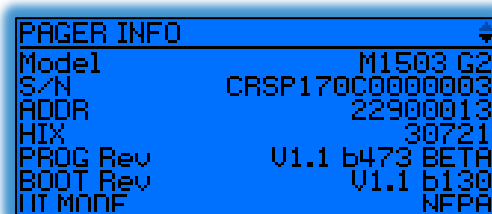
The **Vibrate 1st** parameter specifies whether to issue a vibrate pulse just prior to sounding the alarm.

5.8.4.8.7 Sunday-Saturday

These parameters allow you to enable/disable the alarm on certain days of the week. Setting a particular day to **On** enables the alarm on that day of the week; setting it to **Off** disables the alarm.

5.8.5 Pager Info

The **Pager Info** screen shows the manufacturing information of the pager, including serial number, firmware revision, hardware capabilities, and other information. Please contact your system administrator for the meaning and relevance of this information.



5.8.6 Pager Status

The **Pager Status** screen shows the current status of the pager, including system information, signal strength, battery condition, and other information. Please contact your system administrator for the meaning and relevance of this information.



5.8.7 Shut Down

Selecting **Shut Down** from the setup menu turns your pager off. You may turn your pager back on at any time by holding down the **Select** button for 2 seconds.

6 Care and Preventative Maintenance

For the most part, your M1503 is small and self-contained and requires little in the way of preventative maintenance. However, there are some simple steps you can take to keep your pager in good working order for years to come.

6.1 Cleaning

In clinical environments, The M1503 should be cleaned periodically with a disposable, low-alcohol wipe, such as PDI *Sani-Cloth Plus*. Alcohol-free products, or products with high alcohol content, will tend to fog the display lens over time. The M1503 should be cleaned on a schedule comparable to other personal communications devices such as phones or tablet computers, depending on hospital and unit policy and procedure. Care should be taken not to rub the product label vigorously, to avoid removing serial number and barcode information.

In non-clinical environments, the M1503 should be kept generally clear of dust and debris using a dry dust rag or paper towel. Special care should be taken to clear the front of the pager of loose debris, so that the lens is not scratched when inserting and removing the pager from the holster.

Under no circumstances should the M1503 be immersed in water or cleaned with a wet cloth. Water can easily enter the device and damage the internal circuitry and components.

6.2 Use of Holster and Lanyard

Excessive drops may damage or reduce the performance of your pager, and should be avoided. Use of the holster and lanyard will help prevent accidental drops, and keeping the pager in its transparent holster while operating the UI will provide an additional degree of protection if a drop does occur.

6.3 Battery Care

Your M1503 pager contains an internal lithium ion battery as well as an integrated charging circuit, and it requires periodic recharging. You may safely charge your pager as often as is convenient, for as long as is convenient, using either the charging dock (3) or the charging cable (2.8). For optimal cell life and charge life, you should adhere to the following guidelines whenever possible:

- *Charge your battery at room temperature or slightly cooler*
- *Store your pager at room temperature or slightly cooler*
- *Avoid exposure to extreme heat (e.g., left on a car dash board in hot sun)*
- *Disengage the battery (1.2) when the pager will not be used for extended periods*

6.4 Battery Replacement

Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Under most circumstances and use, your pager battery should last at least 3 years before replacement is required, although this lifespan depends somewhat on the number of messages you send and receive each day. When you find you must charge your battery more often than is convenient, it is time to consider replacement. This replacement must be performed by Critical Response Systems or at an authorized service center. Please contact Critical Response directly for more information.